

FEI CM30T TEM

Instrument capabilities:

1. Instrument specifications:
 - a) Accelerating voltages: 100–300 kV
 - b) LaB₆ emitter
 - c) Resolution (at 300 kV): ~ 0.25 nm point; ~ 0.14 nm line
 - d) Minimum probe size: ~ 9 nm
2. Operating modes: CTEM, CBED, SAED, light element XEDS
3. CCD camera: 1 Mp, 14 bits, AVI capture possible at 15 fps
4. Specimen holders:
 - a) Double Tilt ($\pm 60^\circ \alpha$, $\pm 30^\circ \beta$):
 - with Be cup for XEDS
 - liquid nitrogen cooled (96 K) with Be cup
 - heating (1270 K)
 - b) Tilt/rotate ($\pm 60^\circ$, rotation 360°)
 - c) Single Tilt ($\pm 60^\circ$)

Typical experiments (examples):

- Quantitative XEDS
- Morphological and diffraction contrast studies of defects
- In situ heating & cooling studies
- Electron crystallography
- Weak beam studies of defects

